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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,815	06/15/2000	Stephen McRobert	50100-754	9322

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600 13th Street NW
Washington, DC 20005-3096

EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2661

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DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,815

Applicant(s)

MCROBERT, STEPHEN

Examiner

Robert W Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1.0 The application of Stephen McRobert for a "MATCH SIGNALS IN DATA SWITCHING SYSTEMS INCLUDING MULTIPLE SWITCHING DEVICES" filed 06/15/2000 which claims benefit based upon 60/152,949 which was filed upon 9/9/1999 and amended on 2/6/04 has been examined. Claims 1-15 are pending.

Claim Rejections - 35 USC § 103

2.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3.0 **Claims 1-11 & 13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng (U.S. Patent No.: 6,243,394).

Referring to **Claim 1**, Deng (U.S. Patent No.: 6,243,394) teaches: A data communication system (Fig 4) comprising:

Multiple switching devices for switching data packets (SWITCH PORT CONTROLLERs per Fig 4), and an expansion bus for transferring the data packets between the switching devices (114 per Fig 4 or col 6 lines 1-18)

Each switching device having an address processing block for comparing destination address information of a received data packet with current address information (Each SWITCH PORT CONTROLLER or SPC can compare destination address to address in the TABLE 120 or 122 or 124 per Fig 4 or per col 5 lines 34-57 or col 6 line 1-col 7 line 26) and producing a match signal supplied to another switching device when the destination address information matches the current information (The applicant broadly claims "match signal". When a packet is received by a first SPC and the destination address is not found in its table then the source address information is forwarded to the other SPCs over the bus. When one of the other SPCs determines a match the packet is forwarded to the SPC where the match was found per col 6 line 55-col 7 line 26)

Deng does not expressly call for: a match signal but teaches forwarding the packet to the same SPC in which the destination address and source address match was found per col 6 lines 55- col. 7 line 26.

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It would be obvious to one of ordinary skill in the art at the time of the invention that forwarding the packet to the same SPC in which the destination address equals the source address match requires that a signal be sent to the SPC to forward the packet or signal match; consequently, the message to forward the packet performs the same function as a match signal and is required in order for the invention to work.

In Addition:

Regarding **Claim 2**, wherein the match signal informs said another switching device that the destination address information that causes the match signal is associated with the switching device that generates the signal match (The applicant broadly claims "match signal". When a packet is received by a first SPC and the destination address is not found in its table then the source address information is forwarded to the other SPCs over the bus. When one of the other SPCs determines a match the packet is forwarded to the SPC where the match was found per col. 6 line 55-col 7 line 26. It would be obvious to one of ordinary skill in the art at the time of the invention that match signal would have to be sent back to the first SPC in order for the first SPC to forward the packet to the SPC which had destination address in it's table per col 6 lines 61-68)

Regarding **Claim 3**, wherein the address processing block is configured for producing a forwarding control signal for forwarding the received data packet to a destination associated with the destination address information (The applicant broadly claims "forwarding control signal". When a packet is received by a first SPC and the destination address is not found in its table then the source address information is forwarded to the other SPCs over the bus. When one of the other SPCs determines a match the packet is forwarded to the SPC where the match was found per col 6 line 55-col 7 line 26. It would be obvious to one of ordinary skill in the art at the time of the invention that the first SPC would have to know the address of the SPC that sent the match back to it in order so that the SPC can forward the packet to the SPC per col 6 lines 61-68)

Regarding **Claim 4** wherein the address processing block is configured for comparing source address information of the received data packet with the current address information to update the current address information in accordance with the source address information if the source address information does not match the current address information (The SPCs per Fig 4 compare the source address of the received data packet with the current address in their respective table. They update their own tables if the source address of the packet is on a LAN port that they are directly attached to per col 5 lines 25-67 or col 6 lines 1-43)

Regarding **Claim 5**, wherein the address processing block of said another switching device is responsive to the match signal for updating the current address information in accordance with the destination address that causes the match signal (The applicant broadly claims "another switching device responsive to the match signal for updating the current address information in accordance with the destination address". Col 5 line 1-col 7 line 26)

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Regarding **Claim 6**, wherein each switching device comprises a match pin connected to the match pin of said another switching device to transfer the match signal (The applicant broadly claims "match pin connected to the match pin of another switching device". The reference teaches that if the packet destination address is not found in the table of the first SPC then the packet's destination address checked over the address table look up bus per col 6 line 59-col 7 line 26. The address table lookup bus sends signals over the bus when the match of address occurs and the bus sends signals on pins or matched pin)

Regarding **Claim 7**, wherein the match signal is transferred via the expansion bus (The applicant broadly claims "match signal is transferred via the expansion bus". The examiner interprets this to mean that when a packet is received by a first SPC and the destination address is not found in its table the SPC forwards the destination address to a second SPC over a address lookup bus per col 6 lines 55-67)

Regarding **Claim 8**, wherein the address processing block is configured for processing the source and the destination address information of data packets received from the expansion bus (Address lookup bus interconnects switching port controllers per col 6 lines 16-18. The address lookup bus is used to look up destination addresses in the tables of other SPCs. The tables of other SPCs are created based upon Source addresses consequently the processing block is configured for processing source and destination addresses per col 5 line 1-col 7 line 27)

Regarding **Claim 9**, wherein the address processing block of a switching device is further configured for processing the source and the destination address information of data packets received from network stations connected to the switching device (col 5 line 1-col 7 line 27)

Referring to **Claim 10**, Deng (U.S. Patent No.: 6,243,394) teaches: In a data switching system having a multiple switching devices (Fig 4 shows multiple SWITCHING PORT CONTROLLERS in a data switching system) comprising the steps of:

Comparing destination address information of a received data packet with first current address information maintained by a first switching device (Each SWITCH PORT CONTROLLER or SPC can compare destination address to address in the TABLE 120 or 122 or 124 per Fig 4 or per col 5 lines 34-57 or col 6 line 1-col 7 line 26)

And supplying a match signal to a second switching device when the destination address information matches the first current address information (Each SWITCH PORT CONTROLLER or SPC can compare destination address to address in the TABLE 120 or 122 or 124 per Fig 4 or per col 5 lines 34-57 or col 6 line 1-col 7 line 26. The applicant broadly claims "match signal". When a packet is received by a first SPC and the destination address is not found in its table then the source address information is forwarded to the other SPCs over the bus. When one of the other SPCs determines a match the packet is forwarded to the SPC where the match was found per col 6 line 55-col 7 line 26)

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Deng does not expressly call for: a match signal but teaches forwarding the packet to the same SPC in which the destination address and source address match was found per col 6 lines 55- col. 7 line 26.

It would be obvious to one of ordinary skill in the art at the time of the invention that forwarding the packet to the same SPC in which the destination address equals the source address match requires that a signal be sent to the SPC to forward the packet or signal match; consequently, the message to forward the packet performs the same function as a match signal and is required in order for the invention to work.

In Addition:

Regarding **Claim 11**, wherein the match signal informs the second switching device that the destination address information that causes the match signal is associated with the first switching device that generates the match signal second switching device stores second current information updateable in response to the match signal (The applicant broadly claims "second current information" The SPC where the destination address is found or first switching device has destination address or second current information stored sends a message or match signal to the forward the packet or informs the second device that the responsibility to forward the packet to an output port is its responsibility per col 5 line 1-col 7 line 26)

Regarding **Claim 13**, wherein further comprising the step of comparing source address information of the received data packet with the first current information to update the first current information in accordance with the source address information if the source address information does not match the first current information (col 5 line 1-col 7 line 26)

Regarding **Claim 14**, further comprising the step of comparing the source address information of received data packets with the second current information to update the second current information in accordance with the source address information if the source address information does not match the second current information. (col 5 line 1-col 7 line 26)

Regarding **Claim 15**, wherein the second switching device uses the second current information for making data packet forwarding decisions. (col 5 line 1-col 7 line 26)

Claim Objections

4.0 Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The present invention is directed to an apparatus wherein the second switching device stores second current information updateable in response to the match signal in accordance with the destination address information that causes the match signal. The closest prior art is Deng (U.S. Patent No.: 6,243,394). Deng (U.S. Patent No.: 6,243,394) teaches an device which upon a destination address matching a source address send a message or matched signal to the original switching device but does not teach updating the original switching devices table with the address after receiving the message to forward the packet. The address was already stored by the original switching device before the address before it was forwarded so the address could be searched. The closest prior art Deng does not disclose either singularly or in combination or anticipate or render the following claim obvious if rewritten in independent form including all of the limitations of the base claim and any intervening claims:

“Wherein the second switching device stores second current information updateable in response to the match signal in accordance with the destination address information that causes the match signal” as claimed in **Claim 12**.

Response to Amendment

5.0 Applicant's arguments filed 2/6/04 have been fully considered but they are not persuasive.

The applicant broadly claims “comparing destination address....producing a match signal....current information”. The examiner respectfully disagrees with the applicant’s argument that Deng fails to teach “comparing destination address....producing a match signal....current information”. Deng teaches “comparing destination address....producing a match signal....current information” per col. 6 line 63-col. 7 line 26.

The examiner disagrees with the applicant’s argument that it would not be obvious that a matched signal was created. It would be obvious to one of ordinary skill in the art at the time of the invention that forwarding the packet to the same SPC in which the destination address equals the source address match requires a signal be sent to the original SPC to forward the packet or signal match; consequently, the message to forward the packet performs the same function as a match signal and is required in order for the invention to work.

The argument that cites the limitation: “produce a match signal to prevent packet flooding” is not relevant because it is not a claimed limitation.

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6.0 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


Robert W Wilson
Examiner
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RWW

February 25, 2004



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PRINCIPAL ENGINEER